# BTEC Assignment Brief

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| **Qualification** | Pearson BTEC International Level 3 Certificate in Information Technology |
| | Pearson BTEC International Level 3 Subsidiary Diploma in Information Technology |
| | Pearson BTEC International Level 3 Foundation Diploma in Information Technology |
| | Pearson BTEC International Level 3 Diploma in Information Technology |
| | Pearson BTEC International Level 3 Extended Diploma in Information Technology |
| **Unit number and title** | **Unit 24: Technical Fundamentals for Computing Professionals** |
| **Learning aim(s)** | Learning aim A: Explore the mathematics, logic and processes of computer systems |
| **Assignment title** | Use scripting and coding to meet computing needs |
| **Assessor** | |
| **Issue date** | |
| **Hand in deadline** | |

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| **Vocational scenario or context** | League Computing is a computing consultancy firm that analyses a client needs and designs computing infrastructure implementations that will meet its clients' business and operational goals. |
| | You have been offered an interview to become an intern at League Computing. |
| | As part of the recruitment process, you must demonstrate you have an understanding of the mathematics, logic and processes of computer systems. |
| | You will need to produce a portfolio of evidence that demonstrates your ability to produce computer scripts and programme code to meet different computing needs. |
| **Task 1a** | Demonstrate use of shell scripting (e.g. Bash, PowerShell, Command Prompt) to automate routine administrative tasks, including as a minimum: |
| | • performing file management operations, e.g. move, copy, delete rename |
| | • installing, removing and updating software |
| | • a batch processing task |
| | • two different system monitoring tasks, e.g. network packet analysis, CPU usage, IP LAN monitoring. |

| | Your evidence should clearly show the scripts you created and the system operations carried out. This could take the form of: |
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| | • .txt files of the scripts used |
| | • annotated screenshots |
| | • screencast recordings with annotations and/or voice-overs. |
| **Task 1b** | Produce a series of computer programmes that demonstrate an understanding of developing program code to solve problems. |
| | Your evidence should show your ability to implement a range of fundamental coding conventions, including appropriate use of: |
| | • mathematical, relational and Boolean operators |
| | • data types, e.g. string, integer, float/real, Boolean |
| | • constants and variables |
| | • run-time data structures, e.g. list, array, tuple, dictionary |
| | • selection and iteration. |
| | It is recommended that, as a minimum, you produce three computer programmes as part of this task. |
| | You should provide a commentary showing the specific needs to be addressed for each program. |
| **Checklist of evidence required** | Portfolio of evidence including: |
| | • copies of shell scripts (screenshots or .txt files) |
| | • screenshots/screen casts of system operations carried out by the shell scripts |
| | • copies of program code as .txt |
| | • copies of completed/executable programs (as appropriate to the chosen language) |
| | • program commentary. |

**Criteria covered by this task:**

| Criteria reference | To achieve the criteria you must show that you are able to: |
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| A.D1 | Produce a set of computer programs and scripts that are highly robust and make effective and efficient use of appropriate programming structures to meet identified needs |
| A.M1 | Produce a set of computer programs and scripts that make effective use of appropriate programming structures to meet identified needs. |
| A.P1 | Produce a set of computer programs and scripts that make use of appropriate programming structures to meet identified needs. |

| Sources of information to support you with this assignment | |
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| Other assessment materials attached to this assignment brief | |